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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TON, ANTHONY T	
ART UNIT	**PAPER NUMBER**
2661	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/759,848	YOUNG ET AL.	
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because the followings:

a. **Figure 3** fails to show the reference "**330**" for the Default IP Gateway as described in page 18 line 4 of the specification.

b. **Figure 4** fails to show labels "**YES**" and "**NO**" for the steps 420 and 430.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1, 2, 4, 5, 8, 9, 11-14, 19-21, 23, 24, 27** and **28** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kanamaru et al.* (US Patent No. 6,574,197) in view of *Engwer et al.* (US Patent Application Publication No. 2,003/0,193,895), hereinafter referred to as *Kanamaru* and *Engwer*, respectively.

(a) **In Regarding to Claim 1**: *Kanamaru* disclosed in a communication network including a subnetwork coupled to a backbone network, said subnetwork including an access point (AP) and a plurality of clients associated with said AP *(see Fig.12: A1-An (AP), 1 (backbone network) and D1-Dk (clients))*, a method of exchanging network information, comprising steps of:

a) automatically monitoring network status of said AP on a continual basis over said communication network *(see col.2 lines 23-28: a network monitoring device, for sending responsive to a monitoring packet to the neighbor node downstream)*, said AP coupled to said backbone network *(see Fig.12: Node A3 coupled to backbone network 1)*;

b) automatically and dynamically generating network status information for said AP based upon step a) *(see col.23 lines 28-55)*;

c) automatically sending said network status information for said AP to each of said plurality of clients when there is a change in said network status of said AP *(see col.23 lines 50-56: broadcasts a NOTIFY packet).*

Kanamaru fails to explicitly disclose monitoring network status of the AP at said AP, and sending the network status information from said AP; and

a plurality of clients coupled wirelessly to the AP.

Engwer explicitly discloses such a monitoring network status of the AP at said AP, and sending the network status information from said AP *(see Fig.7: load balancing 740, and Figs.6 and 10; and Fig.2: AP 106b, wireless transceiver I/F 210).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a monitoring network status of the AP at said AP, and sending the network status information from said AP, as taught by *Engwer* with *Kanamaru*, so that an AP can be monitoring a network status properly. The motivation for doing so would have been to improve efficiency to remote wireless access in both a LAN and a WLAN *(see Engwer: Para [0003]).* Therefore, it would have been obvious to combine *Engwer* with *Kanamaru* in the invention as specified in the claim; and

Engwer also explicitly discloses such a plurality of clients coupled wirelessly to the AP *(see Figs.1 and 3: WUs and APs).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a plurality of clients coupled wirelessly to the AP, as taught by *Engwer* with *Kanamaru,* so that wireless terminals can be used in a wired backbone network. The motivation for doing so would have been to provide wired and wireless terminals can be operating in a

hybrid network system. Therefore, it would have been obvious to combine *Engwer* with *Kanamaru* in the invention as specified in the claim

(b) In **Regarding to Claim 2**: *Kanamaru* further disclosed wherein said change of network status in step c) includes a failed communications link between said AP and said backbone network *(see col.7 line 48-61: Node P1 (considered as an AP) breaks away from the network 11 (considered as a backbone network) because of power-down or a failure).*

(c) **In Regarding to Claim 4**: *Kanamaru* further disclosed the method comprising the further step of: d) automatically sending said network status information for said AP to a first client of said plurality of clients when said first client is newly associating with said AP *(see col.3 lines 1-6: monitoring device belongs newly participates).*

(d) **In Regarding to Claim 5**: *Kanamaru* further disclosed wherein a smart agent implements said steps a), b), c) and d), said smart agent located in said AP *(see Fig.1: a combination of components located inside the Node P1 (considered as an AP) can be considered as a smart agent).*

(e) **In Regarding to Claim 8**: *Kanamaru* and Sturniolo et al disclosed all aspects of this claim as set forth in Claims 1 and 4.

Kanamaru fails to explicitly disclose wherein said access point, said plurality of stations, and said smart agent are substantially compliant with a version of the IEEE 802.11 communications protocol.

Engwer further disclosed such a smart agent is substantially compliant with a version of the IEEE 802.11 communications protocol *(see page 2 section [0026]: a standardized protocol such as the IEEE 802.11 protocol).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a smart agent is substantially compliant with a version of the IEEE 802.11 communications protocol of *Engwer* throughout network as taught by *Kanamaru* so that a data structure of a control frame can be sent to wireless terminals to maintain connectivity between the AP and the wireless terminals, the motivation being to control connectivity of wireless terminals more efficient.

(f) **In Regarding to Claim 9**: *Kanamaru* further disclosed wherein said steps c) and d) are implemented through a layer 2 communication protocol *(see col.8 lines 52-64: ATM can be implemented using plurality of network devices; and see col.14 lines 52-61: ATM or Ethernet. Hence, layer 2).*

(g) **In Regarding to Claim 11**: This claim is rejected for the same reasons as claims 1 and 4 because the method in the claims 1 and 4 can be used to practice the method steps of this claim.

(h) **In Regarding to Claim 12**: This claim is rejected for the same reasons as claims 1, 4 and 5 because the method in the claims 1, 4 and 5 can be used to practice the method steps of this claim.

(i) **In Regarding to Claim 13**: This claim is rejected for the same reasons as claims 1, 4 and 8 because the method in claims 1, 4 and 8 can be used to practice the method steps of this claim.

(j) **In Regarding to Claim 14**: This claim is rejected for the same reasons as claims 1, 2 and 4 because the method in the claims 1, 2 and 4 can be used to practice the method steps of this claim.

(k) **In Regarding to Claim 19**: This claim is rejected for the same reasons as Claims 1, 4 and 9 because the method in Claims 1, 4 and 9 can be used to practice the method steps of this Claim.

(l) **In Regarding to Claims 20, 21, 23, 24, 27** and **28**: The claimed subject matters of the limitations disclosed in the claims 1, 2, 4, 5, 8 and 9 are the same as in these claims, respectively. Therefore, the rejections in the claims 1, 2, 4, 5, 8 and 9 would apply to these claims in a computer system as taught.

4. **Claims 6, 7, 16, 17, 25** and **26** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kanamaru et al.* (US Patent No. 6,574,197) in view of *Engwer et al.* (US Patent Application Publication No. 2,003/0,193,895) as applied to claims 1, 4, 11, 20 and 23 as above, and further in view of *Sturniolo et al* (US Patent No. 6,154,461), hereinafter referred to as *Sturniolo.*

(a) **In Regarding to Claim 6**: *Kanamaru* disclosed all aspects of this claim as set forth in claims 1 and 4.

Kanamaru fails to explicitly disclose a first client has previously associated with a second AP, said first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP.

Sturniolo did not explicitly disclose the first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP in his roaming among multiple network.

However, *Sturniolo* clearly discloses a relationship between a gateway (AP) in a second network and a mobile terminal (first client) that previously associated with the gateway; such a

terminal having network address and port address of the gateway. Hence, if the mobile is being operating in TCP/IP protocol networks, the second network would include a second mask, a second gateway, and said second AP as recited in the instant claim.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP in his roaming among multiple network of the instant claim throughout the network as taught by *Kanamaru*to and *Sturniolo* to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, the motivation being to utilize a mobile unit roaming more efficiently.

(b) **In Regarding to Claim 7**: *Kanamaru* disclosed all aspects of this claim as set forth in claims 1 and 4.

Kanamaru fails to explicitly disclose said first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address.

Sturniolo explicitly discloses such a first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address *(see col.11 lines 8-29: the newly registered mobile terminal 36).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address of *Sturniolo* throughout the network as taught by *Kanamaru,* so that an AP can maintain connectivity with

other client efficiently, the motivation being to save memory in database of an AP in a purpose of communication effectively with other currently connected clients to such an AP.

(d) **In Regarding to Claim 16**: This claim is rejected for the same reasons as claims 1, 4 and 6 because the method in claims 1, 4 and 6 can be used to practice the method steps of this claim.

(e) **In Regarding to Claim 17**: This claim is rejected for the same reasons as Claims 1, 4 and 7 because the method in Claims 1, 4 and 7 can be used to practice the method steps of this claim.

(f) **In Regarding to Claims 25** and **26**: The claimed subject matters of the limitations disclosed in the claims 6 and 7, respectively are the same as in these claims. Therefore, the rejections in the claims 6 and 7 would apply to these claims in a computer system as taught.

5. **Claims 3, 10, 15, 18, 22** and **29** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kanamaru et al* (US Patent No. 6,574,197) in view of *Engwer et al.* (US Patent Application Publication No. 2,003/0,193,895) as applied to claims 1, 11, 20 and 23 above, and further in view of *Forslow* (US Patent No. 6,608,832).

(a) **In Regarding to Claim 3**: *Kanamaru* disclosed all aspects of this claim as set forth in claim 1.

Kanamaru fails to explicitly disclose the change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork.

Forslow explicitly discloses such a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork *(see col.19 line 45-col.20 line 7: subnet mask, gateway IP address, IP address).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such wherein said change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork of *Forslow* throughout the network as taught by *Kanamaru* to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, the motivation being to provide seamless roaming options to mobile units.

(b) **In Regarding to Claim 10**: *Kanamaru* disclosed all aspects of this claim as set forth in claim 1; and further disclosed AP link status to said backbone network *(see col.5 lines 8-18).*

Kanamaru fails to explicitly disclose said network status information is taken from a group consisting essentially of: AP Internet Protocol (IP) address; AP IP address type; subnet mask information; subnet mask IP address; and subnet gateway information; subnet gateway IP address.

Forslow explicitly discloses such said network status information is taken from a group consisting essentially of: AP Internet Protocol (IP) address; AP IP address type; subnet mask information; subnet mask IP address; and subnet gateway information; subnet gateway IP address *(see col.19 line 45-col.20 line 47).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such wherein said change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork of *Forslow* throughout the network as taught by *Kanamaru* to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, the motivation being to provide seamless roaming options to mobile units.

(c) **In Regarding to Claim 15**: This claim is rejected for the same reasons as claims 1, 3 and 4 because the method in claims 1, 3 and 4 can be used to practice the method steps of this claim.

(d) **In Regarding to Claim 18**: This claim is rejected for the same reasons as Claims 1, 4 and 10 because the method in claims 1, 4 and 10 can be used to practice the method steps of this claim.

(e) **In Regarding to Claims 22** and **29**: The claimed subject matters of the limitations disclosed in the claims 3 and 10, respectively are the same as in these claims. Therefore, the rejections in the claims 3 and 10 would apply to these claims in a computer system as taught.

Response to Remarks

6. Applicant's arguments dated on **8**/30/2004 with respect to **amended claims 1-29** have been considered but are moot in view of the new ground(s) of rejection.

7. In order to response properly to the independent amended claims, the Examiner decides to change the rejections in accordance with the new ground(s) rejections as set forth in the Office Action.

Regarding to amended **claims 1, 11 and 20**, the Applicants argue that the reference of *Kanamaru* discloses a network monitoring device disposed at a node, wherein a monitoring node that is used to monitor the network connectivity of a remote or neighboring node in the network. As such, the *Kanamaru*'s reference does not show nor suggest such a monitoring at an access point (AP) and sending the monitoring from the AP. Also, the *Sturniolo*'s reference fails to show or suggest such a monitoring at an access point (AP) and sending the monitoring from the AP . The Examiner respectfully agrees with the Applicants on this argument. However, the reference of *Engwer* explicitly discloses said a monitoring at an access point (AP) and sending the monitoring from the AP *(see Fig.7: load balancing 740, and Figs.6 and 10; and Fig.2: AP 106b, wireless transceiver I/F 210).*

Thus, it would have been obvious to combine *Engwer* with *Kanamaru* in the invention as specified in the claims as set forth in this Office Action.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chau Nguyen** can be reached on **571-272-3126**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by: _____
Anthony T. Ton
Patent Examiner
February 16, 2005

PHIRIN SAM
PRIMARY EXAMINER